Title: *Orbits of rotations and beyond*

Abstract:

Rotation of a circle through an irrational multiple of $2\pi$ is probably the most standard example of a uniquely ergodic, but non-expanding dynamical system. The absence of hyperbolicity renders many methods from ergodic theory useless in the analysis of these systems. However, the entire behaviour of an irrational rotation is governed by the arithmetic properties of the rotation number. With Bugeaud, Harrap and Velani, we used such methods to prove that the set of points which are bounded away from the orbit of the point $0$ in a certain quantitative sense has maximal Hausdorff dimension. In this talk, I will present recent work in progress with Jimmy Tseng, we prove the corresponding result for a class of maps which includes irrational rotations, namely Interval Exchange Transformations (IETs).